

Proposal for a topic report on small scale Energy from waste

Background

Energy from waste is an important part of an integrated waste management system. In 2004 IEA Bioenergy task 36 published a topic report “Review of small scale Waste to energy conversion systems.” This topic report was focused on the technology for small scale plants. However there are many other aspects that are of interest when considering the development of energy from waste in general, and small scale energy from waste in particular. The proposal addresses some of these other aspects as a complement to the earlier topic report.

Scope

The suggested topic report will be a natural development of the last report. This time the focus will be on different drivers and limitations concerning small scale energy from waste. The report is suggested to consist of a number of case studies from the countries participating in task 36, but contacts in other countries will also be approached to get a wider approach.

Aspects that are interesting to include in the report and case studies are:

- General data as : Location of plant, community it serves, amounts of waste arising, how that waste is treated. Source separation schemes or any central sorting before energy recovery. Ownership of the plant, if the waste is directed to the plant or is on the free market?
- Technical data: Size of plant, both in terms of mass flow, thermal capacity, and heat/electricity produced. Supplier of the boiler, turbine and flue gas treatment. Steam data (or hot water data).
- Feedstock data: NCV, moisture, ash content and renewable part of the waste if possible.
- Production/delivery of electricity, heat, steam, self-consumption of electricity and heat. Availability, efficiencies
- Drivers/obstacles- Legislation, policy, NIMBY, financing. The drivers could also be related to the number of small scale energy from waste plants in a country. Why was the plant established?
- Economic factors (if possible) such as , gate fee, electricity, heat, capital costs, operating costs, financing, subsidies (size and type)

In addition some countries outside the working group/task 36 group will be contacted to get an overview of the situation in their countries. This will be on a more general level since there will be no case studies in those countries.

As part of the work a questionnaire will be developed as guide for the case studies, the questionnaire will be discussed amongst the task 36 members.

SP Technical Research Institute of Sweden

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TENDER

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The answers and case studies will be analysed, compared and then summarized into a written task report.

SP will undertake the work with preparing the questionnaire, coordinate the case studies, contacting persons outside the task 36 to include more experiences, and then compile the task report. The individual case studies will be the responsibility of the task members. SP will make a case study in Sweden.

Delimitations

The economic data might also be used by Ricardo AEA to develop an economic model for small scale energy from waste. However that work is not covered by this tender. Also the actual case studies performed by the other members of task 36 is not included.

Time plan

SP plan to start the work in March 2014 and to complete the work before March 2015.

Personnel

Contact at SP: Inge Johansson, +46 10 516 58 64, inge.johansson@sp.se

Quality assurance

SPs quality system will be applied, which corresponds to the requirements in SS-EN ISO/IEC 17025.

General conditions

Delivery terms:	<i>SP's General conditions</i>
Duration of offer:	<i>30 days from today's date</i>
Payment terms:	<i>SP's General conditions</i>
General conditions:	<i>SP's General conditions</i>

We hope you will find our offer interesting and look forward to cooperating with you.

Yours sincerely,

SP Technical Research Institute of Sweden
Energy Technology - Combustion and Aerosol Technology

Signature 1

Signature 2

Inge Johansson